

- Type II PC Card
- Based on 16 bit PCMCIA Architecture
- DDC Controller
- Arinc429 controller configured as 2Tx / 4Rx channels
- Configurable for High Speed/Low Speed
- 128 x 32 Static RAM Interface
- Programmable interrupts
- Two 32 (words deep) x 32 (bit) Transmit FIFO
- Built-in Fault Detection Circuitry
- Windows driver support included with card

## OVERVIEW

The AT-PCC-429 card provides a flexible, powerful ARINC429 avionics data bus interface to the PC card socket. The card can be used with a laptop, notebook PC, a desktop PC, or any other device having PC Card interface. The AT-PCC-429 is based on Type II PC Card architecture. The card is designed to transmit and receive messages up to 6 channels. Each channel is software configurable for high or low speed (12.5k or 100k bits per second) and ARINC429 protocol requirements. The ARINC data word can be decoded and sorted based on the Label and SDI bits and stored in RAM and/or FIFO's. The card is integrated with powerful software that reduces development time. All data bus functionality is supported from our advanced API (Application Programming Interface) and VIP (Virtual Instrument Panel).

## HARDWARE

The AT-PCC-429 card can be configured with single ARINC429 controller from DDC, which is configured as 2 Transmit and 4 Receive channels. The controller has 128 x 32 bit static RAM, four 32 (words deep) x 32 (bit) Receive FIFO's and two 32 (words deep) x 32 (bit) transmit FIFO's. Look-up tables loaded into RAM enable the controller's receive circuitry to filter and sort incoming data by label and destination bit as well as provide multilevel data specific interrupts or hardware triggers.

## SOFTWARE

**The AT-PCC-429 software includes:**

- > Virtual Instrument Panel
- > Drivers & APIs

### Virtual Instrument Panel

The AT-PCC-429 card comes with a "Virtual Instrument Panel" providing interactive control of all ARINC429 features. The control interface appears on the computer display and user manipulates these controls with a mouse or keyboard. The purpose of Virtual Instrument Panel is to help the user (mostly system integrators) to quickly setup and use the card, just like a stand-alone instrument with physical front-end knobs, controls and display without getting into programming intricacies.

### Drivers & APIs

The card comes with a powerful set of library functions to access the entire ARINC429 functionality. The drivers are designed in a modular fashion consisting of component functions and application functions. The user's test program can be developed with few calls to the card driver, by using the set of Application functions provided. Driver and high-level API libraries for Windows XP are available. Sample application programs are included.

# AT- PCC - 429

## ARINC429 PC CARD

### PRODUCT SPECIFICATIONS

#### ARINC429 Interface

- Type II PC Card
- 16 bit PCMCIA Architecture
- DDC Controller
- 2Tx / 4Rx ARINC429 Channel
- 128 x 32 bit Static RAM interface
- Programmable Interrupts
- Configurable Bit Format Control
- Built-in Fault Detection Circuitry

#### Transmit Interface

- Programmable 12.5/100KHz bit rate
- Two 32 (words deep) x 32 (bit) Transmit FIFO's
- Independent data transmit by each channel
- Programmable data transmit rate for each channel
- Transmit FIFO Status Indicators

#### Receive Interface

- Four 32 (words deep) x 32 (bit) Receive FIFO's
- Receive data rates can be programmed for channel 0 and 1 independent of channel 2 and 3 in each ARINC429 controller
- Reducing Receive Data Latency
- Filtering & Sorting of data
- Storage of data
- Parity Error Checking & Reporting
- Receive FIFO status indicator

#### Diagnostics

- Testing of Memory Elements
- Testing Transmit/Receive functions
- Wraparound Test for each channel
- Interrupt Function Testing

#### Error Conditions

- Sequence Error
- Address Error
- FIFO Overflow Error
- Receive Data Parity Error
- ARINC Clock Error

#### Software Support

- Driver and high-level API libraries for Windows XP
- A powerful 'Virtual Instrument Panel' developed to mimic the physical card features & capabilities for interactive control & monitoring
- Sample applications provided

#### Physical

- Type II PC Card
- Card dimensions- 54.0 x 85.6 x 5 mm

#### Environmental

- Operating temperature: 0° C to +50° C
- Storage temperature: -20° C to +70° C

#### Power

- + 5 VDC

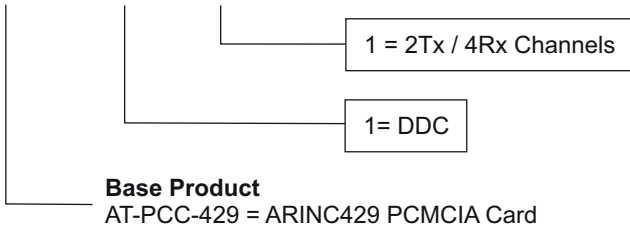
#### Warranty

- 1 year limited warranty

### ORDERING INFORMATION

#### Hardware Selection

AT-PCC-429- Controller-Channels



**Base Product**

AT-PCC-429 = ARINC429 PCMCIA Card



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